

249

A

DISCOURSE

Upon

PRODIGIOUS ABSTINENCE:

Proving that without the Intervention of a Miraculous Power the Texture of Humane Bodies may be so altered, that Life may be long Continued without the usual Supplies of Meat and Drink.

Written by Mr. *John Reynolds* (upon occasion of the Prodigious Twelve Moneths Fast of *Martha Taylor*) for the Satisfaction of a Private Friend, and by him made Publick.

Wherein the Author occasionally discourses concerning the Heart, and shews how far it is Interessed in the Business of Fermentation.

L O N D O N,

Printed, by *R. White*, for *Nevil Simmons*, at the Sign of the three Crowns near *Holborn-Conduit*.

1669

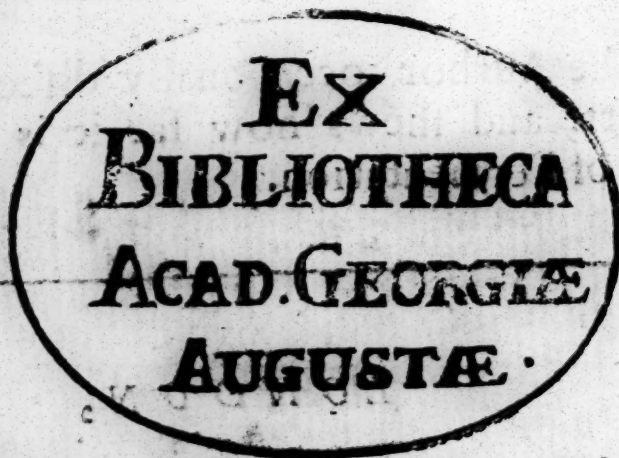
I. Smith



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Rob. Grove, R. P. D.
Episc. Lond. à Sac.
Dom.



Printed by W. Innys, for W. & A. Wood, at the sign of
the three Crowns near Holborn-Conduit.



To the deservedly Famous, and my
Honoured Friend, *Walter Needham*, Doctor of
Physick, as also a Member of, and Curator
Elect to the Royal Society.

SIR,

I were a Solacism of the first magnitude to
entertain you with any thing like a Nar-
rative of the Superannial Fast, under all the
Havocks and depredations whereof the
Derby-shire Damsell hath hitherto been
sustained, though emaciated thereby into the
ghastlineſs of a Skeleton, to the great astonishment of the
Vulgus. Your correspondencies are so faithful, and your
Circumstances so advantageous, as wholly to supersede the
necessity of my engaging in, and the possibility of my grati-
fying you, by such a Province. However, indulge me,
while bemoaning my self, the liberty to tell you, that con-
cerning the Phaenomena's attending this prodigious Ab-
stinence, my own thoughts have been so miserably ravel'd,
and my scanty intellects so much overmatcht thereby,
that

The Epistle Dedicatory.

that I could not with any Complacency look into those, nor with any delight consult these. A just reverence to Reformed Theologues, asserting a total Cessation of Miracles, forbad me to immure my self in any such supernatural Asylum: and a præjudicate opinion of humane bodies in this Animal State, allowed me not to Euresuge my fluctuating mind in Physical Causes clubbing together, by an Anomalous Copulation, to engender so great an Heteroclite. While thus lost in the Chaos of confused apprehensions, and smarting under the Hirricano of my own tumultuary thoughts, I hurry away to a very Worthy and Compassionate Friend, who with a little deliberation runs through the Diagnosticks of my Malady, pitieth my case, and after some sharp Conflicts with his own Modesty, affords the Relief of a Philosophical Elixir (for so I call the ensuing Discourse) wholly transferring the right, which he had in the happy results of his own contemplations, upon me. Now (Sir!) what by much importunity I extorted from him, for my own private satisfaction, I make bold to tender the world a view of, under the Countenance and Protection of your great Name, which is not only able to secure it from the Critical Pharaphrases of an Envious Age, but also to command it the Justice of an unpræjudicate persual with such as know your worth. To my own grief, I have found it much an Anodyne; or as a pleasant Lullabie to my whimpering fancy; the issue of all hath been rest: not knowing, but it may minister the like seasonable relief to others, who have not Wit and Philosophy enough to start any greater Objections, than my self; I judged it worthy to travail the World. The confidence wherein I seek to entitle you to the Patrociny of it, is no less than an assurance of your benign Nature, singular Ingenuity, and obliging goodness, which have begotten and pupil'd in me, that perswasion, ever since I had the happiness and honour

The Epistle Dedicatory.

251

to know you. Besides your clearer Intellectuals, and your vast acquaintance with Natures Recondite Mysteries, made it wholly incongruous to adopt any other the object of this Dedication. I do still remember with the deepest resentments of a grateful heart, the happy distinction betwixt parts Spermatique and parts Hamatique, wherewith in pity you relieved me, when anxiously enquiring, upon a Religious account, after the principium individuationis in humane bodies: a Notion (as to me it seems) more able to rescue the Grand Article of our Creed concerning the Resurrection of the same individual Body from under suspicion, and the many gross absurdities, that some Philosophasters, and half witted Atheists, would fain clogg it with, than any offerture of Humane Reason, that I ever yet had the happiness to meet with! Here (methinks I could break forth into an *ἑυχὴ*, and congratulate my great, though late felicity, that the *ἐδὲ χαράκητιζον τὸ σῶμα*) as Origen, in one sense or other calls it) the Principle maintaining a Numerical Identity in Humane Bodies, through the whole series of Vicissitudes, Changes, and Sanctorian Transmutations; betwixt the Uterine Formation, and the Ultimate Reunition of soul and body, should, after many a tedious search, and frustraneous disquisition, at last be suggested by an hand able, in the maintenance of it, to grapple with any Contradictor. In this you have satisfied not only my reason, but my curiosity too; and therefore (Sir,) so great is my opinion of your skill (absit omnis adulationis suspicio!) that whatever Dogma steps abroad with your name written upon it, I could almost surrender up my self as a perfect Captive to it (were I not a Man, and which is more, a Protestant) upon an implicit faith! But I have, I know not well how, digressed, and stept aside into things heterogeneous to the purport of this Dedicatory Address. I therefore return to my ingenious friends

The Epistle Dedicatory.

Discourse, upon which, were my judgement in these matters worth any thing, I could afford to be liberal in the bestow-
ance of my *Encomium's*. But as 'tis shrouded under your Patronage, so 'tis submitted to your Censure: (this I am bold to do, knowing the Author, so much an Admirer of you, that he cannot reluctate) whether more worthy your pity or your approbation, none can better judge, than your discerning and deserving self. Therefore such as it is, I leave it to your Mercy; and beg leave to tell you, that I should presently fall out with my self, did I not, upon a faithful Scrutiny, find my self in the number of those that really love and honour you.

Farewell.

Worthy



Worthy Sir,



OUR requests to take into consideration the so much fam'd prodigious Twelve Moneths Abstinence of the *Derby-shire* Maid, having the force of commands, have produced these lean results of the imposed Meditations. It cannot be unknown to a Person of your large endowments and hot pursuit after substantial Science, that both Divines, Medicks, Historians, yea, Poets and Legenders have presented the Learned World with a great variety of wonderful Abstinentes, some whereof I shall briefly recite, as well to reserve your sliding time for more Noble Employments, as to manifest that our contemporary *Derbenfe*, is not so singular as some may imagine.

Most certain it is, that the *a* Learned *Mose* *b* fasted 40. dayes, and as many nights whilst he abode on the Burning Mount; the great *c* *Elijah* went as long in the strength of a meal, and no less was the Fast of the *d* holy *Jesus*; *e* *St. Austin* reports, that in his time one survived 40. dayes fasting: but most strange is the

Story

a Καὶ ἔφα-
δ εὐθὺς Μωσῆς
*π*άσιν ὁμοίᾳ
*Ἄ*ργυρίῳ.
Acts 7. 22.
b *Exod.* 34. 28.
c *1 King.* 19. 8.
d *Matth.* 4. 2.
e *August.* in
Epist. 86. ad
Casuluum.

f Nicephor.
l. 14. c. 45.

g. Fernel. l. 6.
Patholog. c. 1.

h Zac. Lusit.
de medic.
princ. hist.
p. 914.

i Sennert. pract.
l. 3. par. 1.
Sect. 2. c. 2.
de long. a abstin.
p. 383.

Story fathered on *f* Nicephorus of three Brethren af-
frighted by persecution into a Cave, where they
slept 373. years, as was known by the Coin they pro-
duced when they awaked. The Learned *g* Fernelius
saith, he saw a pregnant Woman that lived two
moneths without meat or drink. *h* Zacutus Lusitanus
reports, that at Venice there lived a man that fasted
40. dayes, another there 46. dayes; and from Langi-
us and Forstius (two considerable Writers) another
full three years, and that with just stature, good ha-
bit, free countenance, and youthful wit. The fa-
mous *i* Sennertus is copious in such stories; he re-
lates from Sigismundus and Citefius (a person he saith
worthy of credit) that the people of Lucomoria inha-
biting some Mountains in Moscovy do every year dye
in a sort, or rather sleep or freeze (like Froggs or
Swallows) on Novemb. 27. and so continue in that
rigid state till April 24. in which time they use no eva-
cuation, save only that a tenuious humor distilling
from their nostrils is presently condens'd by the
ambient cold, much like to Isicles, by the which those
patent Pores are precluded, and the most endangered
Brain fortified against the fatal assaults of brumal
extremities. The same Sennertus rehearses a Story of
a Virgin at Padua (from Viguntia Professor there)
who anno 1598. was afflicted with a Fever, then a
Tumor, then Arthritick pains, and pains in the Ven-
tricle, and whole abdomen, then with vomiting and
nauseating of food, till at last she could take no food
for two moneths, then after another fit of vomiting,
purging and bleeding, she fasted eight moneths, and
after a little use of food, she fasted two moneths
more. And to be short, he stories it of three persons
that fasted each two years, one three years, another
four,

four, one seven, another fifteen, another eighteen, and one twenty, yea one twenty nine, another thirty, another thirty six, and one forty years. Famous is the story (perhaps fiction being Poetical) of *k Epimenides* (whose words *St. Paul* is thought to cite in his Epistle to *Titus*, *Kēntes aei Jēūsai*) whom some report to have slept 17 years, some 77 years together; but enough of story, those that are desirous to read more, are referr'd to *Marcellus Donat. l. 4. de med. hist. mirab. c. 12. Schenk. l. 4. observ. Guaguinus, l. 3. hist. Franc. Petrarch. l. 3. de mirabil. c. 22. Portius de hist. puellæ German. Uspergensis in Chron. Lentulus in hist. admir. Apol. Baccius l. de vini nutritione. Bozius l. 11. c. 4. de signis eccl. Fulgosius, l. 1. c. 6. Lessens, l. 9. hist. Scot. Favorinus apud Gellium, l. 16. c. 3. and especially *Licetus* that wrote a particular Tract to solve the *Phænomena* of this Prodigy.*

Now Sir, it would be our ambition to advance towards the same noble work, were it not our duty to serve those awhile that blot all these stories with one dash of unbelief: that pen certainly drops blasphemy that dares to rase the sacred Records; and that uncharitableness which presumes to write *falsehood* upon all humane testimonies, they that assent to nothing not confirmed by *Autopsia* are unfit to converse in humane Societies; for how can I expect that any body should believe me, whilst I my self will believe no body? 'tis an argument of an empty brain to presume to comprehend all things, and thereupon to reject those things from an existence in the world, that have not their science in its intellectuals. Many things forreign and strange may well be admitted on good testimonies, sith, the most obvious objects are scarce pervious to the most eagle-ey'd Philosopher;

B

witness

witness the mistakes discovered by *D. Cartes, Gassendus, &c.* in *Aristotle* himself, one of the most sublimated wits in all the Republick of Natural philosophy; and likewise the spots in *Hippocrates* and *Galen*, those mirrours in medicine, modestly pointed at by our famous *Harvey, Glisson, Willis, &c.* but further to satisfy these incredulous persons, 'tis affirmed that some of these Abstinents have been watch'd by the most wakefull eyes and jealous ears, to detect their fraud, if guilty of any; as was that Maid that refus'd all food except only water, for three years, by *Bucoldianus*, with whom she abode for twelve dayes, at the command of *Ferdinand* the Emperour, so that *Apollonia Schrejerana* was taken by the Senate of *Bern*, and put into the Hospital of their Town, and there watch'd till they were satisfied in the truth of her total abstinence.

But enough to these that cut the knot to save the labour of untying it; yet I may not step aside to those in the contrary extream, that believe a century of such reports with a faith almost as miraculous as these miracles themselves, for so they seem to them: but Sir, as 'tis humane infidelity to disbelieve all such reports, because some are false, so 'tis superstitious charity to believe all because some are true. Some persons as scant in their reading, as they are in their travels, are ready to deem every thing strange to be a monster, and every monster a miracle; true it is, the fast of *Moses, Elijah*, and the Incarnate Word, was miraculous, and possibly of some others; yet why we should make all miracles, I understand not; for what need have we now of miracles? Sith such supernatural operations *m* are for them that believe not, not for them that believe, as witnesseth that *celestial*

1 Senect. ubi
supra.

m 1 Cor. 14.
22.
2 Cor. 12.3.

lestial Philosopher St. *Paul*; and thence we infer, Beings are not to be multiply'd without necessity. Moreover, to what end are such miracles wrought? certainly, the infinitely wise Operator labours not for nought, therefore these Abstinents, if miraculous, should confirm some Doctrine rejected, or refute some Errour received, enfranchise some Saints oppressed, subvert some Wickedness exalted, foretell some extraordinary events and issues of Providence to be performed, or for some other end, at which miracles have been usually level'd; but not a Gry of these from most of our Abstinents; moreover, the fast of our Blessed Saviour and his *Prodromi* procur'd not the least detriment to their health, but 'tis otherwise with most of these.

Near of kin to these Miracle-mongers are those that suppose these pretended Fasters to be invisibly fed by Angels; but 'tis incredible that such a favour should be shewn to persons of no known sanctity, as some of these (reported to be *Ethnicks*) were; moreover, either this food was visible, or invisible; if visible, 'tis strange, that vigilant observers, and jealous suspects, could neither discover the ingress at the fore-door, nor the excrementitious egress at the back-door; but if 'twere invisible, then altogether incongruous to our bodyes, and therefore miraculous; of which before. Neither is it of easie credibility, that food should be supply'd by Dæmons possessing them; for we read of no foot-steps of such a possession i'th story, and 'twould be strange if the Devil should grow so modest as to content himself with a single Trophy of a captivated rational; and as strange, that a cloven foot should make such inroads and not leave a doubled, yea redeoubled impression.

Cousin-germanes to these are the presumers that the Fasters are dead, and acted by Dæmons; but this notion is also incongruous not only to their transmigration, from feeding to fasting without any shew of a dissolution, but also to their regrefs from fasting to feeding, (as it hapned to some of these) and health again.

And as for the admirers of occult Philosophy who resolve these phrases into the effects of occult qualities, we only repose, that though an antipathy to this or that food, and possibly to all food, may cause abstinence, yet without food I cannot understand how it gives sustenance; but others attribute all this to the influence of cœlestial bodies, whose operations I deny not to be great on sublunary wights, yet 'tis not imaginable that this universal cause diffusing its energy so promiscuously, should now and then in a Century, here and there in a Countrey produce such stupendious effects, without some universal preparation and predisposition of Bodies to determine its general efficiency to the production of such a Prodigy; but as the former affect darkness, and these an invisible light, we leave them to their retirements, whilest we hunt the more perceptible prints of natures progress in these anomalous productions.

By this time, Sir, I hope you'll grant that the old inconvenient and tottering building is in a measure demolish'd, the rubbish removed, and the ground cleared; let us now propound the necessities and conveniencies, the ends and uses by our new building to be supply'd and attained, and then we'll fall to the architecture it self; I mean, let us consider, what the defect of aliment doth require for the support of humane life. 1. The Natural Evacuations by Urine, Stool,

Stool, Salivation, Terms, and Transpiration, are so lavish, that without reparation by feeding it seems impossible to avoid a sudden dissolution. 2^{dly}, How shall natural heat be preserved from extinction without a constant feeding on the radical moisture? and how shall this Oleaginous humour be secur'd from a nimble consumption, if it receive not additions from frequent feeding? 3^{ly}, How shall Fermentation be continued in the blood without new additions of Chyle? and how shall Chyle be added, if no food received? 4^{ly}, How shall there be a supply of vital spirits, and consequently of animal, without food and fermentation? 5^{ly}, How can life consist without sleep? and how shall we attain sleep without ascending fumes to the brain from ingested food?

For a foundation I shall premise a few severals;
1. The long finger of powerfull Providence is undoubtedly to be observ'd in the production of these wonderfull effects; though these be not advanc'd to the Zenith of divine Miracles, wrought by the immediate hand of Omnipotency, yet the first cause must be acknowledg'd in the proportioning, marshalling, dividing, uniting and actuating of concurrent subordinate second causes for such Heteroclite productions; *Plato* himself could say, *γίγνεται δ' ὁ Θεός*, and the admirable *D. Willis* acknowledges, that Nature's Parent orders natural Principles as to their quantity and mixture, and consequently as to their operations. *o si hujusmodi limitationis causa inquiratur, dicimus quod natura parens posuit primogenio jusq; rei seminatalem spiritus salis & sulphuris copiam quae producendis minimis corporum staminibus, lineamentis succederet. Willis de ferment. p. 49, 49.*

2. 'Tis very evident that when higher causes shall disjoyn what Nature usually conjoyneth, and vice versa, and exalt one Principle and depress another, then very astonishing results appear upon the stage

of humane bodies ; such is the stupendious voracity of some *Helluo's*, the monstrous digestion of your *Lithophagi*, the strange metamorphosis of your sanguineans into midnight melancholy , and of lucid intellectuals into piceous mopishness, &c.

Sanctor. de
aticâ medi-
na.

I. Now to supply the defect of food in its most usefull restauration of what by daily Evacuations the body is depriv'd of ; as I need not compute the vast expence of the Microcosme by stool, urine, spitting and terms, these being vulgarly known, so neither of the transcendent loss by transpiration, reckoned by *p. Sanctorius* to preponderate all the rest ; all which exact constant additions to be made by aliment, without which the body would quickly be depopulated. But I. let it be considered, that this person (as 'tis most credibly reported) emptyes nothing by urine or stool ; and 'tis probable next to nothing by salivation or transpiration, not by salivation through a considerable defect of drinks ; nor by transpiration, because wanting food there's a partial defect of fermentation in the blood, and thence of natural heat, and so by the coldness of the parts the pores are precluded, and the diaphoresis impeded ; whence it will follow, that where the parts are duely warm, and the pores patent, there the more active principles are apt to take flight, yet where the parts are cold, and the pores cork'd up, there 'tis otherwise ; as generous Wines and subtile spirits left in open Vessels, will quickly bid adieu to their more volatile and brisk Principles ; yet if shut up in safe Vessels, these Fugitives are imprisoned and kept to their daily offices : the same is verifi'd in aqueous humours, which (our Kitchens as well as Laboratories experiment) quickly evaporate through intense
subja-cent

subja-cent heats, but not without, and so 'tis here. Thus these plentiful evacuations being suppressed, restauration by food is rendered less necessary. Yet lest you should dread from this hypothesis a suffocating mass of excrementitious humours to assault the heart, &c. I therefore subjoin, that a defect of nutritious assumptions must needs precede a defect of humours: moreover, the blood commands much of these remaining humours for its own chariot-use; neither may it seem dissonant to reason that the ventricle and some of the intestines are us'd as a receptacle of the more tartarous and terrestrial faeculencies; as Embryo's though they receive large quantities of liquid nutriment, yet there's seldom observ'd the least excretion by the fundament, but a retention of a quantity of excrementitious terrestreities in the intestines during their whole abode in their maternal cells; likewise in fermenting liquours the more active principles do precipitate the more sluggish to the bottoms, chinks and walls of their contents; further it cannot be denyed, that by expiration there is a considerable evacuation, as appears both by the heat of our breath, and its moisture, which is discovered by the reception of it into any concavous Body. But 2. admit that there is some waste either by salivation or transpiration, yet these being small, produce only a lingring consumption, which doth often consist for many years with a declining life: such as our Virgins is.

2. How shall natural heat be preserved, if not fed by Oyl, continually supply'd and renew'd by aliment? There are Sir, divers opinions touching humane ignicles, and therefore it highly concerns us to proceed cautiously; it cannot be deny'd that there is a potential

tial heat more or less in all humane bodies, which is the *calor mixti*, remaining when we are dead and key-cold; such as is the heat of Sulphur, Arsenick, &c. (though in a great allay) this appears from chymical operations on mans blood, by which 'tis forc'd to acknowledge its endowments with spirits and volatile Salts in great quantities, and some Sulphur also. Likewise it must be granted, that there is an actual heat abiding in us whilest we live, and sometime after death; this is obvious to the sence of feeling it self: this is the heat (as I conceive) joyn'd with the primogenite humour to which *Aristotle* ascribes life it self. But yet Sir, I am somewhat doubtfull, whether this heat be properly cal'd *calor vivens*, though the great *q Riverius* term it so; or an immediate cause of life, though an *Aristotle* himself pronounce it so: For certainly Holy Writ ascribes life to the blood, *the blood is the life thereof*: and death to a dissolution of the *compositum*, *the body returns to the dust, and the spirit to God that gave it*. But of this dissolution (I suppose) the soul is not ordinarily the cause, but the body; and what part of the body may more justly be challenged to be the Parent (if I may so phrase it) of death, than the blood, which is in a famous sence the parent of life? So then, most killing distempers must arise from the excessive multiplication, consumption or depravation of the blood, and the pernicious effects thereof; yet mistake me not, this hinders not other parts of the body, bowels and humours to be often peccant, as undoubtedly they are by infecting the blood, and receiving infections moribifick from it. Moreover, this heat continues some hours without life, even after the dissolution; and as it is without life, so is life often found with-

River. instit.
ed. l. 1. Sect.
c. 3 de ca-
do innato.
Εστὶ μὲν τὸν
γεννητὸν οὐ
τὸ δὲ σπέρμα.
River. de respir.

Willis de mor-
is convuls.
p. 175.
Needham de
formato foetu,
p. 138.
Loweri dia-
triba, p. 115.
Fernel. de ab-
dit. l. 2. c. 7.

without it, as not only in some Vegetables, as Lettuce, Hemlock, Cucumbers, &c. but in Animals, as Frogs and Fish, which are said to be actually cold, and the Salamander, reputed cold in a high degree. This heat may possibly be but the effect of matter and motion, *i. e.* of the blood, or before it of the seed impregnated with active principles, which through their activity and heterogeneity suffer mutual collisions, or fermentations, whence ebullition, and thence this heat, which is by circulation not only promoted, but also convey'd to all parts of the body, and by the same causes preserved, which possibly may prove the summe of *s Riverius's* implanted ^{*s Riverius ul*} and influent heat. These things presupposed, 'twill ^{*supra.*} not be impossible to guess that this heat is no such Cœlestial fire, as the most famous *Fernelius* would have it, but only the igneous result of the combinations and commotions of the most active elementary Principles; and if there be any other heat, it may prove to be (according to the conjecture of great *Riverius*) the product of the immateriate soul; but of that I understand little, only this is unquestionable, that the cœlestial Soul chooseth for its more immediate organs, the most subtiliated, spirituous, and active parts of matter, such as the vital and animal spirits, and the heat before mentioned, which seems to be of the same Genius, and all but the mechanick productions of various fermentations, percolations and distillations in the humane Engine: Wherefore, I shall crave leave to dismiss this fire till we come to discourse of Fermentations.

And so I pass on to the next flame, which is the *Biolychnium*, or the actual flame of the blood kindled in the heart, asserted both by Antients and Mo-

derns of astonishing titles, and tremendous veneration; which devouring flame, if once kindled, will quickly depredate all the oleaginous aliment, if not renewed by frequent and plentiful assumptions; but therefore 'tis greatly suspected to have no existence in our bodies, because in these Jejunctants it must needs extinguish for want of Sulphureous supplies, and produce death to those that have liv'd long enough to help to entombe it. 'Tis strange to me, that provident Nature should require such vast supplies both of meat and drink, out of which to extract a small quantity of nutritious juice; which with divers Ferments, Colatures, Emunctories and rapid motions, it endeavours to exalt and defecate, and yet after all should expose what she hath attain'd of purity and activity, and consequently of noblest use by her unparallel'd artifices, cost and toil, to the improvident disposal of wastfull flames; for indeed flames are great wasters, as appears in the preparation of the Balsom of Sugar, &c. no less wonderfull is it that a flame should continually burn in the heart, and yet the fleshy walls thereof not boiled, roasted, nor so much as a fuliginous or cineritious colour imparted. But lest Sir, you should be confident that this perennial flame scorns an extinction by these few drops, I therefore commend to your observation those numerous and plentiful buckets that are poured thereupon by the dexterous hand of the very learned and candid Dr. Needham. But yet lest you should be so far prapossessed by the determinations of venerable antiquity, as to reject this new Doctrine, and avowedly maintain this unseen fire, I shall therefore adde: 1. That this Flame can be but small through the defect of bodily exercise, and freer ventilations, (these

Needham de
 ornat. factu.
 129, &c.

(these fasters being mostly close Prisoners) as also of strong fermentations; therefore the less the Lamp, the less Oyl will sustain it. 2. Through the defect of heat the pores are bolted, and transpiration restrained, whence a scarce credible quantity of moisture is retained, which returning both by Veins and Lymphaticks, gives no contemptible quantity of food to this fire. 3. Through the restraint of Transpiration the igneous particles are secur'd from their excursions, to the great increase of intestine heat; for in feeders the loss of transpiration often kindles in the blood a seaverish fire. 4. The Air (as impregnated sometimes especially) entring by the mouth, the nose, and pores in parts passing the various concoctions, may be converted into a humour not altogether inept to preserve the lingring life of this dying flame. 5. In pituitous bodies the abundance of flegme through the various concoctions which it undergoes in the body, may become usefull in the room of more proper aliment to this analogous Lamp in its Table-supplies; which flegme though some reject as excrementitious, yet I suppose they do it only when consideration is from home, of its usefulness in the mastication of our food, wherein (as some say) lyes the first concoction; at least therein lyes the main preparation for the grand concoction in the ventricle; the constant mixture of our food with our spittle in the Jaw-mill, may enforce some considering men to think, that 'tis nearer of kin to our natural moisture than hath been formerly acknowledged. 6. The colliquation of the parts of these emaciated bodies may yield Oyl to these Lamps; as 'tis usually affirmed in Hectick feavers; besides, if fire be nothing but an innumerable host of sulphurous

atomes breaking the Prisons of their former com-
 positions with other heterogeneities, *u* then certainly
 all fire is *αὐτοπαγὸς*, for nothing of that Sulphur re-
 mains, it leaves only the heterogenous Principles,
 with which it was combin'd. 7. 'Tis probable that
 the moisture of these jejune bodies is much not only
 condens'd by their cold, but also loaded with ter-
 restreities through the non-reception of aliment im-
 pregnated with active Principles; whereby 'tis ren-
 dered more durable in this flame. As Oyls the more
 impure, thick, and clammy they are, the less fierce-
 ly they burn, but the more tenuious and spirituous,
 the more nimbly do they flame and expeditiously
 consume. As my face and hair did sadly experiment
 upon the unexpected and suddain conflagration of a
 quantity of the Oyl of Turpentine, as I not long since
 drew it from the fire; I dare say, the Turpentine it
 self would not, or rather could not have serv'd me so.
 8. This moisture being drawn from more jejune Prin-
 ciples (as air, flegme, and lymph) *x* is the less impreg-
 nated with intro-sulphurous particles, and therefore
 less inflamable; as in oligophorous Wines, where the
 spirit and sulphur are greatly exhaled, and with a
 quality abundantly dilated, there fire slowly burns.
 9. 'Tis probable, that the crasis of these bodies is so
 altered by the predominancy of fixed Salts not due-
 ly actuated by powerfull fermentations, that they
 much retard the consumption of Oyl by this vital
 fire; as if Quicklime, Soap, or other saline concretes
 be added to Wax or Tallow, they will (say Chy-
 mists) make a candle of far greater duration than or-
 dinary. Strange is that story of St. *Austine*, who re-
 ports a Lamp to be found in the Temple of *Venus*,
 that no storms could extinguish. Yet much more
 strange

u Willis de
Ferment, p. 66.

x Willis de
febr. p. 103.

Willis de
Ferm. p. 8 66.
French's Art
of Distillation,
p. 148.

Job. Baptist.
Porta.

Card. de sub-
tilitate.

Ludovic. Vives
lib. 21. c. 6.

de Civitat. Dei
Augustin.

Guido Panci-
rollus.

strange was that Torch, reported to have burnt 1550 years in the Tomb of *Tullia*, *Cicero's* daughter, which being expos'd to the Air, by the opening of the Tomb, was quickly extinguish'd: Now if our humours should chance to attain the disposition of these antient Oyls, they might supply the *Byolychnum* long enough. 10. Or if these fixed Salts should attain fluidity, as 'tis probable they have done, because some of these Abstinents were of melancholick complexions, then the sulphurous parts of the humours would be so fettered and oppressed thereby, that they could not so quickly burst from under the yoke into violent flames, but by degrees and leisureably as they could disentangle themselves; from whence will arise a more durable though less forceable fire. Lastly, it seems probable, that extraneous particles of fire may be convey'd into a body, and therein lodged, which shall afterwards cause heats to kindle therein. That igneous particles pass from one body to another seems a matter of daily experience: for 'tis not easie to demonstrate how our bodies are warm'd by their approach to the fire, if there be not fiery effluvia from the burning matter that enter our bodies; and that these fiery atoms thus lodg'd in a foreign body, may afterwards by water, air, or the like, break forth into a considerable heat, is very imaginable; as in Quick-lime, which before 'tis burnt is not at all subject to combustions by air or water; but when it hath endured the Kill-fire, then 'tis readily kindled by the addition of almost any humidity; which humidities may not be supposed directly to contribute to the kindling of the atoms, but to the dissolving of the Concrete, and thereby the disentangling of the Atomes, whereupon they fly out into a

*Sennert. pract.
l. 3. part. 1.
Sect. 2. de
longa abstinentia.*

French's Art of
Distill. 130.

considerable heat; like whereunto is that Powder, boasted by Chymists, to take flame in your hand by the only addition of Spittle. Thus Sir, having tender'd a slender repast for your antique lamp, I crave leave to attend the more modern Hypothesis of fam'd fermentation.

Henshav. in
α. ποχάλω.

Needh. de form.

fat. p. 132.

Willis de feb.

p. 113.

Castle's Chym.

Gal. p. 81, 82.

Willis de ferm.

p. 24, 25. de

feb. 101, 102,

113.

Lower Diatr.

p. 121, 124.

Castle's Chym.

Gal. p. 81, 82.

Thirdly, How shall Fermentation be continued in the blood without the addition of chyle? and how can chyle be added without food assumed? It is the opinion of ingenuous *Henshavius* that fermentation is caused by the addition of chyle to the blood in the heart, like that of Wine by the adding of Must, from whence doth arise (he saith) a necessity of frequent feeding: which the excellent D. *Needham* seems much to approve: and both the incomparable *Willis* and ingenious *Castle* cite *Hogeland* for ascribing heat to a fermentation in the heart, like to that which happens upon the pouring of Spirit of Nitre on Butter of Antimony. R. Now Sir, to help us out at this dead lift also, I shall take notice of the several opinions of the Learned touching the causes of fermentation.

1. There is a ferment placed in the heart it self by the great *Willis* and his *Hypaspistes*, the dexterous anatomist Dr. *Lower*, with Dr. *Castle*, and other renowned Assertors of fermentation. This Sir would serve us eximiously, to supply the defect of new chyle, if it were but sufficiently evinced; but I must confess ingenuously though (as 'tis not unknown to you) I have laboured to advance the antique glory of the heart, yet I cannot satisfie my self, though I would, that there is any such implanted ferment therein; for I find not this ferment confirmed by any experiment, or other sufficient evidence, but (*absit invidia verbo*) too precariously asserted: nor any

any necessity assigned for such a ferment; the doctrine of fermentation being sufficiently demonstrated without it; and though the honour ascribed to the heart may seem to require it, yet I cannot approve of conferring honours, which infer a necessity of multiplying Beings above what the *opus* and *usus* of Nature createth. Neither can I conceive where this ferment should be nested; it must be either in the walls of the heart, or in the chambers thereof; in the walls (saith Dr. *Castle* from *Severinus*, *Danius*, *Castle* ubi *D. Cartes* and *Hogeland*) are mechanick spirits, semi-nal salts or ferments; but yet (*pace tanti viri*) the heart by its carnous fibres, membranes, colour and consistence seems to be but a muscle, as our worthy Dr. *Needham*, and acute *Steno* affirm; and if so, how a ferment should be there generated any otherwise than in other muscles, I do not understand; it hath not the Parenchyma of the Liver, Spleen; or other parts which are colatures to the blood, whereby they easily separate, and having separated retain what may conduce to constitute ferments; but the walls of the heart seem only like other muscles to receive blood for their own private use, but none for a publick stock. Moreover, if there were such a salt ferment, it is a wonder it doth not discolour the rutilous fibres; as the salt in the Spleen manifestly doth, but leave it of the same hien with other non-fermenting muscles; neither are there any cavities within these walls capacious enough to contain these mechanick spirits for publick offices; nay it is observable that the heart is more firm, fast, hard, and less stor'd with porosities than other muscles: neither in the auricles, or ventricles can these spirits keep quiet possession, by reason of that impetuous torrent which many times in every minute washeth

De format. fœt.

132.

Steno de Musc.

Gland.

washeth both flores and walls ; and though these cavities have their cellars, yet by the so frequent contractions of the omnimodous fibres causing the systole, there's not only a mixture of the blood at the bottom with that on the top, but also a violent extrusion of both made in the same pulsation : neither in dissections is there any considerable difference found betwixt that in the heart, and that in the veins, as famous *Harvey* observeth. Yet with a *non obstante* to these premises I must tell you, I opine that fermentation may not abusively be ascribed to the mechanick structure and operations of the heart, though not enriched with an innate ferment, of which hereafter more seasonably.

2. It is not unknown that several liquors are self-sufficient to command a fermentation, and that perfective ; as Wine, Cyder, with other like spiritosulphuro-saline-fluids, as also fruits of a more crass consistence, as Apples, Pears, Plumbs, &c. whereof many are advanced, by lying, to a greater perfection after pull'd from their Mothers Breast ; and it is at least a violent presumption that the blood confectioned by such self-fermenting bodies, and they exalted greatly by the various additional concoctions, percolations, and (as it were) distillations in the transcendently exquisite, and proto-laboratories of humane bodies is crown'd with the same Diadem of self-fermenting principles : and indeed an ordinary analysis of blood according to the rules of Pyrotechny will discover all those principles of Spirit, Sulphur, Salt, Water and Earth, lodg'd in its embraces which are sufficient to elaborate fermentations : which is further confirm'd in that when some of the innate fermenting principles, as suppose Salts begin to languish, several artificial ferments prove highly useful ;

useful; under this notion (saith the sagacious *Willis*) *De form.*
are the fixed Salts of Vegetables, Chalybeats, &c. of
such Sovereign efficacy.

Thirdly, after various disquisitions touching the
use of the Spleen, some exalting it to the honour of
sanguifying for the lower belly, others depressing
it to the vile use of a sink, 'tis now by many upon
consideration of its colour, site, and vessels resolv'd
to be a colature, wherein the more black and secu-
lent juice is sever'd from the blood, and being there
reserved it becomes a ferment to the scarlet liquor;
even as a small parcel of dough reserv'd in a saline
condiment grows acid, and so arrives to the dignity
of a levain, or ferment to the new farinaceous mass.
The principles which in this bowell are supposed to
be regent, are salino-terrestrial, which by overlong
abode attain fluidity, and so become acetous, like
Spirit of Vitrioll, Nitre, and of other saline con-
cretes, and that which renders this the more pro-
bable, are the sowre belchings of hypochondriack
persons, the whiteness of their tongues, the soreness
of their throats, the excess of their appetite, and the
emaciating of their bodies: all which seem to proceed
from a preternatural acidity: and *vice versa*, when
the Spleen hath lost its ferment, then the blood
grows too insipid as appears in Cachexys, Ascites,
Tympanites, &c. These things premised, 'twill be
no difficulty to prove, that the blood is fermented
by the Spleen: 'tis but very lately that I added
Spirit of Vitrioll to a small quantity of the recent
blood of a Patient, which caus'd a visible fermenta-
tion, and such a coagulation that it became almost
of the colour and consistence of our table Mustard,
only there remain'd some perfect black parts, but

no red ones: from whence I conjecture, that 'tis an acid humour which causes such a black sediment in the urine of many hypochondriack persons, and that the same humour it is that coagulates the blood often, if not alwayes, and renders it so unapt for circulation: wherefore by the way, I would offer it to your consideration, whether that sort of Scorbute and Melancholy which is rooted in blood more than sufficiently hot, florid, and fluid (as oft-times they are) can ascribe its origination to a meer acidity, or to fluid Salts: and consequently whether it be not a misapplication of the nitrosulphurous Plants which renders them of late suspected of impertinency? for to what end should these Plants be given to those persons whose blood exceeds with salt and sulphur already? yet in the colder more chachectical Sorts of Scurvy and Melancholy nothing possibly may be found more proper; for 'tis well known, that fixed salts and fluid salts, or (which is the same thing) acid spirits do highly ferment, and cause a considerable heat; as lately discover'd it self to me in the preparation of Tartarus Vitriolatus, whence I further conjecture that those preparations of Chalybs, Corall and other saline concretes which rob them of their salts, or (which is the same thing) that glut them with acidities so plentifully as to leave no capacity to receive more acids do spoil them *eo nomine* of their fermenting vertue. But lest I should seem to transgress whilst I intend scarcely to digress, I return to remind you that you have a third ferment which in these Abstinents is presumable to be highly useful, for several of them (not to say all) were Spleneticks before they were Abstinents.

Fourthly,

262

Fourthly, 'Tis probable that the seminal humours in these Virgins may by a long abode in their vessels grow acid, and thereby supply the blood with a more than ordinary ferment. Here are two things supposed, the first is that the seed is impregnated with salt, and that is prov'd by the many arguments of the Philosophical Dr. *Ente*, the other is that the seed by its principles may elaborate the blood, this is evident in females whose seed being grown fecundate and vegete; it so levains the blood, that except it purge it self by menstrual terms it exposes to innumerable diseases; but much more manifest in men by the eruption of their Beards, the greatning of their voice, the heating of their blood, effeminate desires, &c. These things being evidently so, 'twill much strengthen our Hypothesis to observe that most of these Damosels fall to this abstinence between the age of fourteen and twenty years when the seed hath so fermented the blood, that various distempers will probably ensue without due evacuations; except in our case, wherein through the defect of fermenting food we are enabled to bear the excess of these so much the better.

Fifthly, There are several other innate ferments placed by nature in humane bodies, as the Learned testifie, as that ascrib'd by Dr. *Willis* to the brain, for the freeing the spirits from the entanglements of other principles to which they were married whilst they abode in the blood, that so the brains distillation might proceed the more prosperously; likewise that in the reins, which is like Runnet to Milk, to precipitate the serosities, that the ureters may ex-terminate them as useless, burdensome excrements. There are many more assign'd, yea more than can

(22)
be numbred, if Dr. Willis's Doctrine be true of a fermentation through the habit of the body, caused by the concurrence of arterial blood and nervous juice; but these I lightly pass over, because I conceive they are not immediately intended for the elaborating of the bloody mass; yet I may not forget them, because working upon the blood, 'tis not to be doubted but the veins derive somewhat of their vertue with the retrieved blood.

Sixthly, But to approach yet nearer to our mark, I affirm that though there be no edibles received, yet it follows not that there's no sort of new chyle to renew the bloods fermentation: for First, In these cold bodies there must of necessity be a far greater quantity (*consideratis considerandis*) of pituitous humours than ordinary: for if transpiration be denyed to our bodies but a very small time, what a redundancy of flegm doth presently oppress us: which flegm being led into the mouth by a great variety of salivating ducts, and thence conveyed into the Ventricle may take off the acidity, the edge of the appetite, by which they tolerate their abstinence with the greater patience; and also suffer a sorry concoction, which is much advanc'd by the attendance of all the concoctive forces to subact this sluggish matter, which in other bodies are variously diverted by the great variety of food frequently admitted. Secondly, 'Tis probable that some of these Fasters were more than ordinarily addicted to flegm before their abstinence, which is usual with those whose concoctions are low, and with these 'tis more than an even lay they were not very high, which must needs be augmented by the defect of urine and stool, which if granted, adds somewhat to our purpose. Thirdly,

ly, The air receiv'd continually into the Stomach by the Mouth and Nose, and also into the blood more directly, though sparingly by the pores, and virtually, if not formally by the Lungs, may contribute much to this humour, but more to the fermentation of the blood: that the air is impregnated with Salts, the Learned Dr. *Ente* affirms and ascribes vegetation, as also the production of various animals thereunto, as the worthy *Willis* doth frost and ice: and 'tis asserted by Chymists that *Caput Mortuum's* lixivated, if expos'd to the open air for a good space they shall re-attain their saline principle: and that salts cause fermentation in the blood, hath been already noted. Yet one step further I may advance upon good ground, and that is, these salts may much renew the ferment of the stomach also in lieu of other condiments. Moreover the Liver being an ample bowell, instructed with a great variety of vessels, enrich'd with constant traffique from most of the Corporations in the Microcosm, so curious in its elections and collections of the sulphuro-saline commodities so diligent in reconding them in a peculiar Cell, and thence transmitting them to the intestines upon all occasions; these severals, I say, considered, it may be rationally inferr'd, that 'tis not only helpful to the guts in their excretions, but also in their fermentations, whereby the chyle is rendred not only more fermentible in the blood, but also more fermentescent thereunto. Yet Sir, lest this lean meat should not satisfy your more delicate pallat, I must advertise you, that the blood in these persons must needs be sparing, and therefore the lesser chyle may ferment it, especially considering that their fermentations are but small, as

262

Apoloz. de ferment. p. 93.

Glisson. Anat. hepatis.

appears by the smallness of their heat, and therefore pray do your self the right, not to expect an account of robust ones.

Seventhly, The heart it self contributes much to this fermentation. 'Tis acknowledged by all that the circulation of the blood being a rapid motion through the indefatigable pulsation of the heart adds much to the fermentation; we see that motion given to Wine, Ale, Cyder, or Cream of Milk though sufficiently fermented, will yet without a new ferment give a new fermentation. But Sir, lest you should mistake me when I stumbled at an innate ferment in the heart, and yet stood upon't that fermentation may be ascribed thereto, let me unbosome my self, that you may see what the heart contributes thereunto. First, The heart is as it were a cistern into which the bloody veins, milky veins, and water veins, or lymphaducts by mutual consent deposite their multiform juices. Secondly, It hath the force of a Mill by its quaquaverse fibres continually busied in their constrictions and dilatations to grind and make small the more crassy particles of the juices. Thirdly, Of a Mortar wherein the more exact mixture of these different juices is highly promoted. Fourthly, Of a Ginne expelling the blood sufficiently subacted, and then to the further execution of its Offices, but too too troublesome; and by the way, the burden of the blood may be one cause of its pulsation, for 'tis said, if a live heart be taken out of the body, the prick of a Pin will renew its pulsation. Fifthly, Of a Pump to give motion and according to the sanguiferous ducts to the several parts distribution of this juice adapted to nutrition. Sixthly, Of a Loom wherein the blood is fermented. Seventhly, Of a kind

kind of Philosophical Furnace, wherein a spirital *Bio-lychnium* is kindled, I intend only a heat perchance caused only by the motion and fermentation aforesaid. Eighthly, Of a Pelican to rarifie and exalt the vital spirits. Ninthly, of an Alimbeck (not vulgar) whereby the spirits receive a kinde of separation (though yet they run with the blood) which being condensed in the Refrigeratory of the habit of the body (as the learned *Waleus* expresseth it) are the more easily subject to the brains Philtration, and the nerves preservation. Tenthly, of a potential Philtre, whereby there's made such a segregation of homogeneous particles into their proper classes, as renders the blood much more obedient to the colatures, and emunctories of the body; as runnet in the milk potentially separates the whey, and prepares it for an actual separation by the sieve; and in chymical preparations the acid liquor, or diluteing large quantity of weakning water, provoke a kinde of fermentation, whereby the suspended atomes in the strong Menstruums are precipitated, and so prepared for a more facile separation: so that indeed all the Engines in Natures shop depend mainly upon the right tone, texture, and operation of the heart. From which it seems apparent to me (which yet I submit to clearer minds) that the heart is further serviceable to fermentation, and other offices of Nature, than meerly Pump-like to conciliate motion: which may be further confirmed by the site of the heart in the centre of the body, as also by it's firmest muniments by which 'tis garrison'd on its back by the spine, on its face by the sternum, on its sides by the ribs, under its feet by the diaphragme, and over its head by the canopy of the pyramidall thorax, and lastly by its buff-coat the

the Pericardium; and which is not nothing, the curious fabrick with various camerations, the retiform fibres and various passages, the uniform procedure of Nature in the formation of the hearts of Animals, whilest often it sports it self in the building of other parts, and its primogeniture, as appears by the *Vesicula palpitans* first formed in Egges (according to the renowned *Harvey*) the rudiment of the heart, and the bloods constant flux and reflux to and from the heart, even then when the liver and lungs (though famous bowels) are pass'd by unsaluted in the circulation of Embryo's; as also Natures great care to supply the defective passages of those *viscera* by a *foramen ovale* in the septum of the heart, lest the intercourse of the blood with the heart should be impeded, which hole is yet afterwards precluded when the Infant is midwiv'd into a new World; much of this curiosity of Nature about the heart, seems utterly unnecessary, if it serv'd only for motion; but we are sure that God and Nature do nothing frustraneously. Neither am I yet satisfied, that the whole of the bloods motion is to be ascribed to the hearts pulsation; for *Conringius* affirms that in live dissections the blood strongly circulates a long time after the left ventricle hath lost its pulse; yea though the heart be taken out, yet presently is not the motion of the blood destroy'd; which seems to be confirm'd by the experiment upon Frogs, which leap so nimbly, and swim so freely after their hearts are exempted, that they cannot be known from unwounded Frogs that exercise in their company; the story whereof that most dexterous Anatomist *D. Needham* hath published; moreover, if a Ligature be apply'd to a Vein or Artery, whereby the pulse is intercepted with the undulation of the blood
also,

also, yet the blood beyond the bond runs its course towards the heart ; and which is so much the more strange, because 'tis the motion of a heavy body contrary to its natural tendency, upward. Moreover, if the pulse of the heart were the only cause of the motion of the blood, why then is not the menstrual blood thrust into other parts as well as into the uterine? sith the other parts equally with these receive the constant force of the hearts even pulsations and impartial distributions ; likewise we see that the animal spirits in the nerves, with their juice, the Lympha in its ducts, the Chyle in its thoracicks, the Seed in its seminals, the Urine in the ureters, and the Flegme in its pituitary Vessels are all in motion without the force of any such Engine to give the origen thereto. Whereupon I am apt to conjecture, that Nature hath furnished several parts with an attractive power, the blood with fermentation, and several Vessels with a kinde of Vermicular motion of their own (no doubt excited by the nerves) the Porta with Asinus in the Liver, which serves for a Pump, and the Cava (or one part of it) with a pulsifick energy (by which blood is thrust into the right ventricle, as the learned *Walaus* asserts) by which the motion of humours is promoted ; and consequently that the rareness of the structure, unweariedness of the pulsations of the heart, &c. are designed to some higher ends, than meerly, and as such, to give motion, though that it doth with an Emphasis.

Fourthly, How can Spirits both vital and animal be prepared and separated without food, and frequent fermentations? R. 1. Whether there be a flux of animal spirits through the *genus nervosum* seems yet not fully resolv'd ; and if no flux then the waste is small, and

a small reparation may supply a small waste; but I confess, I understand not how Narcotick fumes, nor redundant humours restagnating in the brain can cause an Apoplexy, Epilepsie, Palsie, &c. in the whole body, if there be no flux of spirits from the brain; nor how the hurt from a Coach in the seventh Vertebre of the back (mention'd by great *Galen*) could cause a Palsie in three fingers; nor why we anoint the Vertebres of the back for Palseys in the extreme parts, if there be no flux of spirits. 2. Supposing a flux of animal spirits through the nervous systeme, yet (according to the Doctrine of famous Dr. *Wharton*) much of the nervous juice separated by the glandules, is returned by the veins and Lymphaticks, and so not lost, though enfeebled by its peregrination; and more yet deposited (according to Dr. *Willis* the great Reformer of Physick) by the extremity of the nerves in the habit of the body, is again retri'd by the Lymphaticks, which serving in our Abstinent little or nothing to assimilation (only somewhat to the cherishing of the implanted spirits) is the more plentifully return'd, and so the loss (thus far forth) less considerable than ordinary. 3. 'Tis apparent that there's a decay of these spirits, as well as an obstruction in most of these Abstinent, as witnesseth their great inability to motion. 4. The fermentations mentioned before, though small, may contribute something to the encrease of these spirits; for Chymists know that there are few juices so insipid, so sterile, but by the help of fermentation may yield a not contemptible spirit. 5. Those spirits that pass from the brain to the extremity of the body, and thence returned as before by the Lymphaticks, and that more forceably and plentifully being reflected by the impervious cold and constipated skin, seem rather tyred than exhausted,

hausted, which may by the small ferments aforementioned, the contritions, mixtions, and exaltations of the heart, and the perpetual motions of the scarlet liquor be rarifi'd and volatiliz'd to do at a dead list further good service. 6. 'Tis notorious, that fents do hugely affect the brain; as to instance in Apoplexies, hysterical passions, and in some sort of Syncope and Cephalalgies common practice doth demonstrate; so then if feeding animals perceive such strange alterations by odoriferous exhalations (as of *Assa fatida*, *Galbanum*, *Verruca Equina*, &c. which according to the prodigious invention of the most Philosophical Dr. *Willis* are able to restrain the most violent explosions (like those of Gunpowder, than which none more violent) of the Nitro-sulphurous atoms with which in spasmodick distempers the nervous juice is impregnated, (and by which it's reduc'd to the greatest disorders) why may not these Abstinents be reliev'd by such enriched fumes also?

Fifthly, without sleep no long life, and without food no sleep; for say the Ancients, sleep is the binding up of the first Sensorium, or common sense caused by the food digesting in the stomach, elevating its fumes to the brain, which there condensing stop the passages of the animal spirits, whereby they are detained from their just visitations, whence the senses are disenabled for the execution of their offices. R. 1. 'Tis not certain that sleep is absolutely necessary to life, for we read of many that liv'd waking: 'Tis said that *Ramus* studied Philosophy so uncessantly, that he became blinde, or deaf, or both, through defect of sleep. *Rhasis* watched so long at his study of Physick till at last he could not sleep at all; likewise a Doctor of the Law studyed so indefatigably, that

Aristot. de som. & vig. c. 3
ii τὸ πρὸς αἰσθητικῆς καὶ λογικῆς πρὸς τὸ μὴ εὐδᾶναι ἐκτρέφει.
Galen. de sympt. caus. c. 8. de motu muscul. c. 4.
Zacut. Lusitan. de med. princ. lib. 2. p. 23, 24.
25. l. 5. Patholog. l. de morbo. cap. c. 16.
l. de Providentia.

He never laid his eye-lids together for four months ; yet all recovered by the use of Hypnoticks. The most inquisitive Galenist *Fernelius* reports a certain man to have surviv'd 14 moneths waking. The grave *Heurnius* relateth a story, from (he saith) a truly learned man *Jerom Montuus*, of a Noble Matron that lived 35 years without sleep, nor hurt thereby ; and of another that lived 10 years waking. *Seneca* reports that *Macepas* lived three years without sleep, and at last was recovered by musick. 2. But I affirm not that our Jejunants are Vigilants, and therefore adde, that though these persons receive no external food, yet airy condensations and concretions, the flegmatick humours, colliquations of the parts, &c. afford matter for such vapours, and so much the more plentifully, because they are environ'd with a thick wall, whose very crevisses, and much more gates, and publick cut-lets, are so close shut up and barricado'd, that these troops of Exhalations that were wont to be dispersed, are now crouded together, which assaulting the brain may do much to bind up her common sense. 3. It seems probable by Apoplectical Dormitators that a cold humour lodged in the brain is a great causer of sleep ; and why such a humour may not lodge in a sufficient proportion in these constipated brains to procure intermitting sleeps, I see not. 4. 'Tis apparent that Narcoticks, as *Opium*, and in their measure, Wines, Tobacco, &c. provoke sleep, not by any cold quality, for they are all prov'd to be hot, but ('tis probable) by adding such a ferment to the blood, as renders the spirits separated in the brain more torpid, ignave, and consequently inept to motion, and the execution of their offices ; or, (which is almost the same thing) as renders the blood

inept

inept for separation of spirits in the brains Alembick, whence the wearied spirits for want of fresh supplies are becalmed and quiescent. So then if the humours in the bodies of these Abstinents should haply partake of these Narcotick sulphurs, they may prove somniferous without the elevation of fumes from digesting food. But Sir, lest you should be startled at this unphilosophical discourse, in representing sleep rather as a non-emission of spirits from the brains, than a non-immision of them to the brain from the external senses, and consequently as a negation of action rather than of passion, I crave leave to munde you, that I am not only deficient in the beard, but much more in the brain of some very great Philosophers who rank not only the external senses but the first internal or common sense in the predicament of passions; which I confess I cannot understand, because I know, that when devout persons are taken up in divine services, though their eyes be wide open, and presented with various objects, yet they see them not, because they mind them not; likewise when diligent Students are intent on their books, they hear not the Clock that strikes at their ears; and sound sleepers with lethargical persons feel not the pulling and haling of their friends that would awake them, &c. From whence I conjecture, that though objects act *ad ultimum virium* upon the external senses in imprinting their species, yet that causeth not sensation, except there be an actual attendance of the sensitive spirits upon the sensible objects, a framing of their effigies or species, and a conveyance thereof to the understanding. Can you imagine that *Columbus* his journey to the *Indies*, his surveying that unknown World, and returning a map thereof to his own Countrey-men, was a meer passion of his, and only

the action of a novel Jig of American Atoms? or Camden's perambulation through all the Coasts of this Island, with his observations thereon, which he digested into a valuable volume, was meerly his suffering, but wholly the doing of subtile spirits, and æthereal globules magically charm'd into a once happy combination. But to return, 5. Cold juices, as of Housleek, Lettuce, Violets, &c. will conduce to our sleep, and 'tis not to be doubted but the Juices in these bodies may be cold enough to effect the same. 6. The animal spirits in these persons being but languid, are the less active, and consequently can give the fewer repulses to the insinuating courtships of somniferous causes. 7. The spirits of these languishers ('tis probable) are scant and defective, and therefore easily tyred by their constant operations, and consequently easily perswaded either by a command of the Heaven-born Soul, or an Exhalation from the earthy body to yield to this temporary death. 8. Great security of minde, pleasing Fancies, either from Imagination (such as some of these are said to be swell'd withall) or from the senses affected by Musick, dropping waters, gliding Rivers, whistling winds, &c. are u uall promoters of insensation. By all which you may perceive that there are more doors to our Bedchambers than one.

Thus Sir, to satisfy your curiosity, I have travel'd somewhat an unbeaten, yet not altogether unpleasant path, and that I might not return these fruits of my travels as jejune and sterile as the Countrey visited, I have therefore taken a slight view of some of the Monuments of Antiquity, as also of the stately superstructures of the new modell that occurred in our Journey; yet there is one thing remaining that should have been premised; and that is an exact history of
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our Damofell, but that you cannot expect, because
 you did not demand, and I suppose you did not de-
 mand, because you knew I was unable to perform;
 yet that I might not seem to build on the sands, I
 shall present you with a short Narrative receiv'd
 since I began this Discourse, from a person of known
 ingenuity and honesty, and therefore most worthy
 of credit.

“ This Abſtinent is one *Martha Taylor* a young
 “ Damofell, born of mean Parentage, inhabiting not
 “ far from *Bakewell* in *Darbyſhire*, who receiving a blow
 “ on the back from a Milner, became a priſoner to
 “ her bed for ſeveral dayes, which being expired,
 “ ſhe obtained ſome enlargement for a time, but by
 “ encreaſing diſtempers was quickly remanded to
 “ her bed-priſon again; where continuing ſome time,
 “ ſhe found at laſt a defect in her Gula, and quickly
 “ after a dejection of appetite, ſo that about the
 “ 22. of *December*, *Anno* 1667. ſhe began to abſtain
 “ from all ſolid food, and ſo hath continued (ex-
 “ cept ſomething ſo ſmall at the ſeldome ebbings of
 “ her diſtemper as is altogether inconfiderable) till
 “ within a fortnight before the date hereof, which
 “ amounts to thirteen months and upwards; as alſo
 “ from all other ſorts both of meats and drinks, ex-
 “ cept now and then a few drops of the Syrup of
 “ ſtew'd Prunes, Water and Sugar, or the juice of a
 “ roasted Raiſin, &c. but theſe repaſts are uſed ſo
 “ ſeldom, and in ſuch very ſmall quantities, as are
 “ prodigiouſly inſufficient for ſuſtentation; ſhe eva-
 “ cuates nothing by urine, or ſtool, ſhe ſpits not that
 “ I can hear of, but her lips are often dry, for which
 “ cauſe ſhe takes water and ſugar with a feather, or
 “ ſome

" some other Liquids, but the palms of her hands are
 " often moist, her countenance fresh and lively, her
 " voice cleer and audible, in discourse she's free, her
 " belly flap'd to her back-bone, so that it may be
 " felt through her Intestines, whence a great cavity
 " is admitted from the *Cartilago ensiformis* to the Na-
 " vil, and though her upper parts be less emaciated
 " (though much too) yet her lower parts are very
 " languid, and inept for motion, and the skin there-
 " of defiled with a dry pruriginous scurf, for which
 " of late they have washed them with milk; she
 " sleeps so sparingly, that once she continued five
 " weeks waking: I hear nothing of any extraordina-
 " ry previous sanctity, though since her affliction, be-
 " ing confin'd to her bed (which lyeth in a lower
 " room, by the fire-side) she hath learn'd to read,
 " and being visited so plentifully by the curious from
 " many parts, as also by the Religious of all perswa-
 " sions, she hath attain'd some knowledge in sacred
 " Mysteries, but nothing of Enthusiasm that she pre-
 " tends unto. And lest she should prove a Cheat,
 " she hath been diligently watch'd by Physicians,
 " Surgeons, and other persons, for at least a fort-
 " night together, by the appointment of the Noble
 " Earl of *Devon*; as is already publish'd by Mr. *Ro-*
 " *bins* B. of D. that is, Ballad-maker of *Darby*, whose
 " Ballad (they say) doth much excell his Book.
 " Likewise several other persons at other times have
 " been pleas'd to watch for their own satisfaction,
 " who detecting no fraud, have given the account
 " above mention'd, which was for the main confirm'd
 " to me by a Sophy, the renown of whose wisdom
 " hath often made *England* to ring, who assured me,
 " that he had an exact account of her.

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This story being born thus out of due time, it may seem necessary to make some reflections therefrom on the precedent discourse. And 1. her Age confirms the probability of a ferment in the seminals. 2. An antipathy to meat was not the promoter of the Tragedy, but an inability to swallow. 3. Her assumptions of Liquors, though seldom and slender, contribute not only to a petite concoction in the Ventricle, but also to a fermentation in the Heart. 4. Her restrained Evacuations by Urine and Stool adde much to her moisture, as well as to our trouble to render the assumption and non-evacuation consistent: to the performance whereof, let it be remembred, that in this respect she was formerly compar'd to Embrio's, who use no excretion by the fundament, but retain in their Intestines the more crass feculencies, till the time of their exclusion the uterine embraces; which is the rather to be admitted, because she, as well as they, receives nothing but liquids; only in this she differs, they evacuate by the Urachus into the Allantoides their urinal excrement, but she hath no excretion of Urine at all: the defect whereof may yet be supply'd by these three advantages which she hath above them, as is her expiration, extraordinary transpiration in the palms of her hands, and the far smaller quantity of Liquors that she receives. 5. Her non-excretion, and the driness of her mouth, argue the remanding of the humours to the further services of Nature. 6. The Atrophy of the parts, and inability to motion, seem to argue a defect of nervous juice and animal spirits; which weakens the necessity of our giving a perfect

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fect account how Nature may be compleatly sustain'd in the absence of food. 7. Her impetiginous Eruptions argue the saltness of her blood, which addes the greater probability to the several saline Ferments mentioned before. 8. Her sparing sleep shews not only the no-necessity of the ordinary measures of healthfull Dormitators, but also that sleep may be conciliated otherwise than by the powerfull mediation of fuming food. 9. There's no cause from any antecedent sanctity to ascribe this mirandous production to miraculous causes. 10. Her abode in a lower Room doth accommodate her with a moister Air, which is more generative of humours. 11. Her propinquity to the Fire conduceth to the extraneous reception of igneous Atoms. 12. Her non-pretensions to Revelations, and the constant visits she receives from persons of all forms, may serve to occlude not only the mouths that are so unevangelical as to cry her up for a Miracle, but those also that are so unphilosophical as to cry her down for the cheat of a Faction.

Now Sir, should I take my hand from the Table; did I not suspect that some one may possibly reply upon me, and say, if I take it to be possible to live without food, 'tis a wonder I fall not my self to this piece of frugality; I therefore adde, though with this jejune Table one may possibly live, yet it follows not that I can, for according to the old Saw, *that which is one mans meat is another mans poyson*: And even in Physick 'tis affirm'd by that noble Philosopher Esq; Bayle (a worthy Fellow of the Royall Society, of whose admirable designs I would you should know that I am a great admirer) that
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some medicines as particularly, Salt of Amber is ^{septe. chym.} effectual for Epileptical Children; not so for adult ^{P. 251.} Epilepticks; and the deserving Dr. *Castle* affirms, that *Mercur. dulc.* is more safe for children, than grown persons, especially if irrigated with acidities. But Sir, I finde my self launching into a wide Sea, ^{chym. Gal.} I shall therefore tack about to do my Devoire, and ^{P. 26.} crave your acceptance of this slender Offering, and your *quietus est* for the present, giving you assurance that in so doing you may hereafter command

SIR,

Kings-Norton. Feb.
25. 1668.

Your Observant Servant,

Jo. Reynolds.
